

IN THE CLAIMS:

1.59. (Cancelled)

1 60. (Currently Amended) ~~The method of claim 59 further comprising: A computer~~
2 implemented method for managing a file system, comprising:
3 receiving data directed to the file system;
4 labeling the data as belonging to a current consistency point or to a next consis-
5 tency point;
6 allocating disk space for data belonging to the current consistency point, and not
7 allocating disk space for data belonging to the next consistency point;
8 selecting a time for writing the current consistency point to persistent storage;
9 locating buffer data which has been written to a buffer but which has not been
10 written to persistent storage before the time selected for writing the current consistency
11 point; and
12 capturing the buffer data into the current consistency point.

1 61. (Previously Presented) The method of claim 60 further comprising:
2 locating buffer data which has been written to a buffer after the time selected for
3 writing the current consistency point; and
4 capturing the buffer data into the next consistency point.

1 62. (Currently Amended) The method of claim 59-60 further comprising:
2 maintaining a flags array in a buffer data control structure, the flags array having
3 entries associated with ~~a~~the current consistency point and with ~~a~~the next consistency
4 point.

1 63. (Previously Presented) The method of claim 62 further comprising:

2 using a monotonically increasing consistency point (CP) counter to identify the
3 current CP as the current value of the CP counter, and the next CP as the value of the CP
4 counter plus 1.

1 64. (Currently Amended) ~~The method of claim 63 further comprising: A computer~~
2 implemented method for managing a file system, comprising:
3 receiving data directed to the file system;
4 labeling the data as belonging to a current consistency point or to a next consis-
5 tency point; and
6 allocating disk space for data belonging to the current consistency point, and not
7 allocating disk space for data belonging to the next consistency point;
8 maintaining a flags array in a buffer data control structure, the flags array having
9 entries associated with the current consistency point and with the next consistency point;
10 using a monotonically increasing consistency point (CP) counter to identify the
11 current CP as the current value of the CP counter, and the next CP as the value of the CP
12 counter plus 1;
13 utilizing modulo-two arithmetic with the CP counter to perform an AND opera-
14 tion using “CP AND 1” to obtain a first value of 0 or 1; and
15 utilizing modulo-two arithmetic with the CP counter to perform an AND opera-
16 tion using “1-(CP AND 1)” to obtain a second value of 0 or 1, to produce flag values al-
17 ternating between values of “0” and “1” to represent current and next consistency points.

1 65. (Currently Amended) The method of claim ~~59-60~~ further comprising:
2 associating the received data with a buffer data control structure by setting a
3 pointer in the buffer data control structure to a memory location associated with the re-
4 ceived data.

1 66. (Previously Presented) The method of claim 65 further comprising:

2 marking the buffer data control structure as being dirty for a next consistency
3 point by setting a flag in a flags array of the buffer data control structure.

1 67. (Currently Amended) The method of claim 59-60 further comprising:
2 differentiating entries associated with the current consistency point and the next
3 consistency point by performing modulo two addition to a consistency point counter.

1 68. - 69. (Cancelled)

1 70. (Currently Amended) ~~The system of claim 69 further comprising:~~ A computer
2 implemented file system, comprising:
3 a network adapter to receive data directed to the file system;
4 an operating system to label the data as belonging to a current consistency point
5 or to a next consistency point; and
6 a storage adapter to allocate disk space for data belonging to the current consis-
7 tency point, and not allocating disk space for data belonging to the next consistency
8 point;
9 a processor to select a time for writing the current consistency point to persistent
10 storage;
11 buffer data which has been written to a buffer but which has not been written to
12 persistent storage before the time selected for writing the current consistency point; and
13 the operating system to capture the buffer data into the current consistency point.

1 71. (Currently Amended) The system of claim 69-70 further comprising:
2 a flags array in a buffer data control structure, the flags array having entries asso-
3 ciated with a current consistency point and with the next consistency point.

1 72. (Previously Presented) The system of claim 71 further comprising:

2 a monotonically increasing consistency point (CP) counter to identify the current
3 CP as the current value of the CP counter, and the next CP as the value of the CP counter
4 plus 1.

1 73. (Currently Amended) The system of claim 72 further comprising: A computer
2 implemented file system, comprising:
3 a network adapter to receive data directed to the file system;
4 an operating system to label the data as belonging to a current consistency point
5 or to a next consistency point; and
6 a storage adapter to allocate disk space for data belonging to the current consis-
7 tency point, and not allocating disk space for data belonging to the next consistency
8 point;
9 a flags array in a buffer data control structure, the flags array having entries asso-
10 ciated with a current consistency point and with the next consistency point;
11 a monotonically increasing consistency point (CP) counter to identify the current
12 CP as the current value of the CP counter, and the next CP as the value of the CP counter
13 plus 1;
14 a modulo-two arithmetic with the CP counter to perform an AND operation using
15 “CP AND 1” to obtain a first value of 0 or 1; and
16 the modulo-two arithmetic with the CP counter to perform an AND operation us-
17 ing “1-(CP AND 1)” to obtain a second value of 0 or 1, to produce flag values alternating
18 between values of “0” and “1” to represent current and next consistency points.

1 74. (Currently Amended) The system of claim 69-70 further comprising:
2 the operating system to associate the received data with a buffer data control
3 structure by setting a pointer in the buffer data control structure to a memory location as-
4 sociated with the received data.

1 75. (Previously Presented) The system of claim 74 further comprising:

2 the operating system to mark the buffer data control structure as being dirty for a
3 next consistency point by setting a flag in a flags array of the buffer data control struc-
4 ture.

1 76. (Currently Amended) The system of claim ~~69-70~~ further comprising:
2 the operating system to differentiate entries associated with the current consis-
3 tency point and the next consistency point by performing modulo two addition to a con-
4 sistency point counter.

77. -79. (Cancelled)